

**PCT**WORLD INTELLECTUAL PROPERTY ORGANIZATION  
International Bureau

## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 6 :  
C12N 15/10, 15/90, C07K 14/395

A1

(11) International Publication Number:

WO 97/37011

(43) International Publication Date:

9 October 1997 (09.10.97)

(21) International Application Number: PCT/GB97/00875

(22) International Filing Date: 27 March 1997 (27.03.97)

(30) Priority Data: 60/014,490 1 April 1996 (01.04.96) US

(71) Applicant (for all designated States except US): SETRATECH  
S.A.R.L. [FR/FR]; 31, rue de la Liberté, F-75019 Paris (FR).

(72) Inventors; and

(75) Inventors/Applicants (for US only): BORTS, Rhona, Harriet  
[US/GB]; 4 Eynsham Road, Sutton nr. Witney, Oxford-  
shire OX8 1RZ (GB). LOUIS, Edward, John [US/GB]; 4  
Eynsham Road, Sutton nr. Witney, Oxfordshire OX8 1RZ  
(GB).(74) Agent: PENNANT, Pycrs; Stevens Hewlett & Perkins, 1  
Serjeants' Inn, Fleet Street, London EC4Y 1LL (GB).(81) Designated States: JP, US, European patent (AT, BE, CH, DE,  
DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).

Published

With international search report.

(54) Title: MEIOTIC RECOMBINATION IN VIVO OF PARTIALLY HOMOLOGOUS DNA SEQUENCES

## (57) Abstract

Process for the meiotic recombination *in vivo* of partially homologous DNA sequences having up to 30 % of base mismatches, wherein eukaryotic cells containing the sequences and in which an enzymatic mismatch repair system is defective, are maintained under conditions to effect meiosis. Preferably the enzymatic mismatch repair systems of the eukaryotic cells are defective by virtue of at least one *mutS* protein and/or at least one *mutL* protein being defective or missing. The eukaryotic cells may be unicellular organisms such as yeasts.

